

## CLAIMS

1. Use of a kynurenine 3-hydroxylase inhibitor for the manufacture of a medicament for increasing the number of islets of Langerhans cells.

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2. Use of a kynurenine 3-hydroxylase inhibitor according to Claim 1, in the context of the treatment and/or prevention of diabetes, its complications and/or its related pathologies.

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3. Use of a kynurenine 3-hydroxylase inhibitor for the manufacture of a medicament for the treatment of prediabetes.

4. Use according to Claim 3, for which the said prediabetes is an insulin-dependent prediabetes.

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5. Use according to Claim 3, for which the said prediabetes is a non-insulin-dependent prediabetes.

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6. Use of a kynurenine 3-hydroxylase inhibitor for the manufacture of a medicament for the treatment and/or prevention of insulin-dependent diabetes.

7. Use of a kynurenine 3-hydroxylase inhibitor for the manufacture of a medicament for the prevention of non-insulin-dependent diabetes.

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8. Use of a kynurenine 3-hydroxylase inhibitor for the manufacture of a medicament for the treatment of early non-insulin-dependent diabetes.

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9. Use according to any one of Claims 3 to 8, for which the said treatment or prevention is by increasing the number of islets of Langerhans cells.

10. Use of a kynurenine 3-hydroxylase inhibitor in combination with one or more immunosuppressants, for the manufacture of a medicament for the prevention and/or treatment of insulin-dependent diabetes.

5 11. Use according to any one of the preceding claims, which is suitable for the said treatment and/or the said prevention in the case of a patient with an impairment in the number of islets of Langerhans cells.

10 12. Use according to Claim 11, for which the said patient shows a decrease in the number of islets of Langerhans cells of at least 40%.

13. Use according to Claim 11 or 12, for which the said patient shows a decrease in the number of islets of Langerhans cells of between 50% and 90%.

15 14. Use according to any one of the preceding claims, which is suitable for the said treatment and/or the said prevention in the case of a patient with glucose intolerance.

20 15. Use according to Claim 14, for which the said patient presents a fasting glycaemia of between 1.10 g/l and 1.26 g/l and a glycaemia after meals of between 1.40 g/l and 2 g/l after meals.

25 16. Use according to any one of the preceding claims, which is suitable for the said treatment and/or the said prevention in the case of a patient with one or more anti-islets of Langerhans cells immunological markers.

17. Use according to Claim 16, for which the said marker(s) indicate(s) the existence of an autoimmune response of the body directed against the antigenic markers of the body's islets of Langerhans cells.

30 18. Use according to Claim 16 or 17, for which the said marker(s) is (are) chosen from the anti-islet (ICA), anti-glutamic acid decarboxylase (GAD), anti-

tyrosine phosphatase (IA-2) and anti-(pro)insulin (AIA) auto-antibodies, or the anti-carboxypeptidase H, anti-64kD and anti-heat shock protein antibodies.

19. Use according to any one of the preceding claims, which is suitable for  
5 the said treatment and/or the said prevention in the case of a patient with insulin  
resistance.

20. Use according to Claim 19, for which the said patient responds partially  
or not at all to insulin secreted by the beta cells or injected.

10 21. Use according to any one of the preceding claims, for which the said  
patient presents a level of glycated haemoglobin of higher than 7%.

15 22. Use according to any one of the preceding claims, for which the said  
patient has islets of Langerhans cells showing an anomaly of insulin secretion in  
response to glucose.

23. Use according to any one of the preceding claims, for which the said  
patient presents a suppression of the early peak of insulin secretion.

20 24. Use according to any one of the preceding claims, for which the said  
patient shows related hyperglycaemia and obesity.

25 25. Use according to Claim 24, for which the said patient suffers from pa-  
diatric obesity.

26. Use according to any one of the preceding claims, which is suitable for  
the said treatment and/or the said prevention in the case of a patient presenting  
any diabetic risk factor.

30 27. Use according to Claim 25 or 26, for which the said risk factor is chosen  
from familial history, gestational diabetes, excess weight, obesity, insufficient

physical exercise, high blood pressure, a high level of triglycerides, hyperlipidaemia and inflammation.

28. Use according to any one of the preceding claims, comprising the in vitro treatment of isolated islets of Langerhans cells with the said kynurenine 3-hydroxylase inhibitor.

29. Process for increasing the number or the insulin-secreting capacity of islets of Langerhans cells, comprising the in vitro application of a kynurenine 3-hydroxylase inhibitor to the said cells.

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30. Pharmaceutical composition comprising a kynurenine 3-hydroxylase inhibitor in combination with one or more immunosuppressants.

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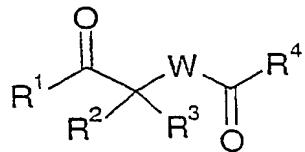
31. Pharmaceutical composition according to Claim 30 or use according to Claim 11, for which the said immunosuppressant is chosen from any physical, chemical or biological agent for reducing or inhibiting the stimulation of an immune response of the body with an antigen.

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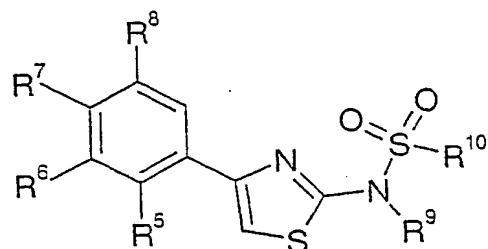
32. Use or process according to any one of the preceding claims, such that the islets of Langerhans cells represent the beta cells.

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33. Use or composition according to any one of the preceding claims, for which the said kynurenone 3-hydroxylase inhibitor is a compound of the general formula (I) or (II):



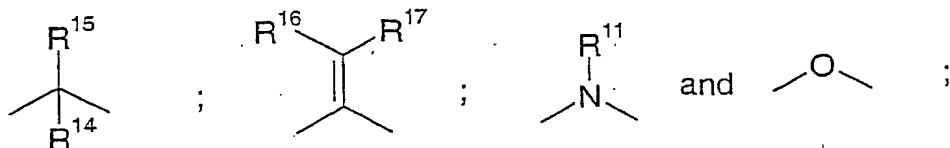
(1)



(11)

in which:

- W represents a divalent radical chosen from the following radicals:



• R<sup>1</sup> represents a radical chosen from linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, a heterocyclic radical, an aryl radical and a heteroaryl radical;

• R<sup>2</sup> is chosen from hydrogen, a halogen atom, hydroxyl, thiol, carboxyl, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylcarbonyl, alkoxy carbonyl, aryl, heteroaryl, cycloalkyl and a heterocyclic radical;

• R<sup>3</sup> is chosen from hydrogen, a halogen atom, hydroxyl, thiol, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, heteroaryl, cycloalkyl and a heterocyclic radical;

• R<sup>2</sup> and R<sup>3</sup> together also possibly forming a group =CR<sup>16</sup>R<sup>17</sup>; or alternatively together forming, with the carbon atom that bears them, a cycloalkyl radical or a heterocyclic radical;

• R<sup>4</sup> is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyloxy, aryloxy, heteroaryloxy, -N(R<sup>12</sup>R<sup>12</sup>'), -N(R<sup>12</sup>)OR<sup>13</sup>, linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl and a heterocyclic radical;

• R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup>, which may be identical or different, are chosen independently of each other, from hydrogen, a halogen atom, and a nitro, cyano, hydroxyl, trifluoromethyl, alkyl, alkoxy, cycloalkyl or aryl radical;

• the radicals R<sup>5</sup> and R<sup>6</sup>, on the one hand, or R<sup>6</sup> and R<sup>7</sup>, on the other hand, may also form, together with the carbon atoms to which they are attached, a benzene ring optionally substituted by one or more groups, which may be identical or different, chosen from a halogen atom, a trifluoromethyl, cyano or nitro radical, an alkyl radical and an alkoxy radical;

• R<sup>9</sup> represents hydrogen or an alkyl radical;

• R<sup>10</sup> is chosen from an alkyl, an aryl and a heteroaryl radical;

- $R^{12}$  and  $R^{12'}$ , which may be identical or different, are chosen, independently of each other, from hydrogen and an alkyl, alkenyl, alkynyl, alkylcarbonyl, aryl or heteroaryl radical; or alternatively  $R^{12}$  and  $R^{12'}$  may form, together with the nitrogen atom to which they are attached, a monocyclic or 5 bicyclic heterocyclic group containing a total of 5 to 10 atoms, among which 1, 2, 3 or 4 are chosen, independently of each other, from nitrogen, oxygen and sulfur, the said heterocyclic radical also optionally comprising 1, 2, 3 or 4 double bonds and optionally being substituted by one or more chemical groups, which may be identical or different, chosen from hydroxyl, halogen atom, alkyl, alkenyl, alkynyl, 10 alkoxy, alkylthio, aryl, heteroaryl, heterocyclic radical and trifluoromethyl;
- $R^{13}$  is chosen from hydrogen and an alkyl, alkenyl, alkynyl, aryl, heteroaryl,  $-N(R^{12}R^{12'})$  or  $-N(R^{12})OR^{13}$  radical;
- $R^{14}$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, carboxyl, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylcarbonyl, alkoxy carbonyl, aryl, arylalkyl, heteroaryl, cycloalkyl and a heterocyclic radical;
- $R^{14}$  may also form a bond with  $R^2$ , thus forming a double bond between the carbon atoms respectively bearing the substituents  $R^{14}$  and  $R^2$ ; or alternatively  $R^{14}$  forms, with  $R^2$  and with the carbon atoms that bear them, a ring containing a total of 3, 4, 5, 6 or 7 carbon atoms, among which 1, 2 or 3 may be 20 replaced with an atom chosen from nitrogen, oxygen and sulfur, the said ring possibly comprising one or more unsaturations in the form of (a) double bond(s), and being optionally substituted by one or more radicals, which may be identical or different, chosen from oxo, alkoxy, alkoxy carbonyl and alkylcarbonyloxy;
- $R^{15}$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, carboxyl, 25 alkyl, alkenyl, alkynyl, alkylcarbonyl, alkoxy carbonyl, alkoxy, alkenyloxy, alkynyl-oxy, aryloxy, cycloalkyloxy, heteroaryloxy, heterocyclloxy, alkylthio, alkenylthio, alkynylthio, arylthio, cycloalkylthio, heteroarylthio, heterocyclthio, aryl, heteroaryl, cycloalkyl and a heterocyclic radical;
- $R^{14}$  and  $R^{15}$  also possibly forming, together with the carbon atom that 30 bears them, a cycloalkyl radical or a heterocyclic radical;

- $R^{16}$  and  $R^{17}$ , which may be identical or different, are chosen, independently of each other, from hydrogen, a halogen atom, an alkyl, aryl, heteroaryl or cycloalkyl radical and a heterocyclic radical; or alternatively
  - $R^{16}$  and  $R^{17}$  form, together with the carbon atom that bears them, a cycloalkyl radical or a heterocyclic radical; and
  - $R^{11}$  is chosen from hydrogen and an alkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, cycloalkyl or cycloalkylalkyl radical, and any protecting group for an amine function;

10 and also the possible geometrical and/or optical isomers thereof, and possible tautomeric forms thereof;

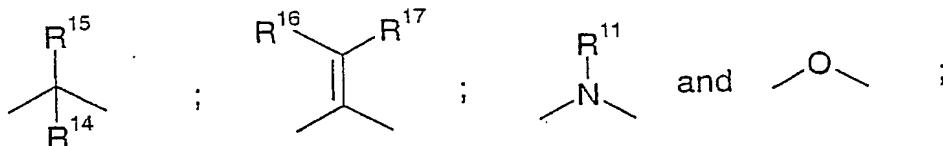
the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

34. Use according to Claim 33, in which the compound belongs to the general formula (I).

20 35. Use according to any Claim 33 or 34, in which the compound of the general formula (I) has the following characteristics, taken separately or in combination:

- $W$  represents a divalent radical chosen from the following radicals:



25

- $R^1$  represents a radical chosen from linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, alkenyl, cycloalkyl, cycloalkenyl, a heterocyclic radical, an aryl radical and a heteroaryl radical;
- $R^2$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, carboxyl, alkyl, alkenyl, alkoxy, alkylthio, alkylcarbonyl, alkoxy carbonyl and aryl;

•  $R^3$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, alkyl, alkenyl, alkoxy, alkylthio and aryl;

•  $R^2$  and  $R^3$  together also possibly forming a group  $=CR^{16}R^{17}$ ;

5 •  $R^4$  is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyoxy, aryloxy, heteroaryloxy,  $-N(R^{12}R^{12'})$ ,  $-N(R^{12})OR^{13}$ , linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, cycloalkyl, cycloalkenyl, aryl, heteroaryl and a heterocyclic radical;

10 •  $R^{12}$  and  $R^{12'}$ , which may be identical or different, are chosen, independently of each other, from hydrogen and an alkyl, alkenyl, alkynyl, alkylcarbonyl, aryl or heteroaryl radical;

•  $R^{13}$  is chosen from hydrogen and an alkyl, alkenyl, alkynyl, aryl,  $-N(R^{12}R^{12'})$  or  $-N(R^{12})OR^{13}$  radical;

•  $R^{14}$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, carboxyl, alkyl, alkenyl, alkoxy, alkylthio, alkylcarbonyl, alkoxy carbonyl, aryl and arylalkyl;

15  $R^{14}$  may also form a bond with  $R^2$ , thus forming a double bond between the carbon atoms respectively bearing the substituents  $R^{14}$  and  $R^2$ ; or alternatively  $R^{14}$  forms, with  $R^2$  and with the carbon atoms that bear them, a ring containing a total of 3, 4, 5 or 6 carbon atoms, among which 1, 2 or 3 may be replaced with an atom chosen from nitrogen and oxygen, the said ring possibly comprising one or 20 more unsaturations in the form of (a) double bond(s), and being optionally substituted by one or more radicals, which may be identical or different, chosen from oxo, alkoxy, alkoxy carbonyl and alkylcarbonyloxy;

•  $R^{15}$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, carboxyl, alkyl, alkenyl, alkylcarbonyl, alkoxy carbonyl, alkoxy, alkylthio and aryl;

25 •  $R^{16}$  is chosen from hydrogen and an alkyl or aryl radical;

•  $R^{17}$  represents a hydrogen atom; and

•  $R^{11}$  is chosen from hydrogen and any protecting group for an amine function;

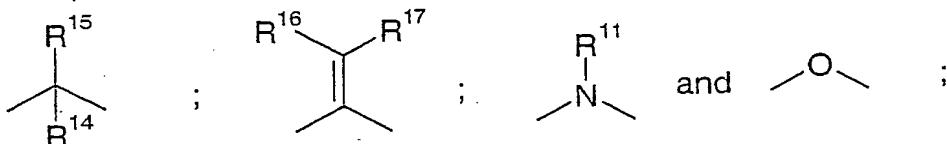
30 and also the possible geometrical and/or optical isomers thereof, and possible tautomeric forms thereof;

the solvates and hydrates of these compounds;  
and the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

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36. Use according to one of Claims 33 to 35, in which the compound belongs to the family (Ia) of the general formula (I) in which:

- W represents a divalent radical chosen from the following radicals:



10 • R<sup>1</sup> represents a radical chosen from linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, a heterocyclic radical, an aryl radical and a heteroaryl radical;

15 • R<sup>2</sup> is chosen from hydrogen, a halogen atom, hydroxyl, thiol, carboxyl, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylcarbonyl, alkoxy carbonyl, aryl, heteroaryl, cycloalkyl and a heterocyclic radical;

• R<sup>3</sup> is chosen from hydrogen, a halogen atom, hydroxyl, thiol, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, heteroaryl, cycloalkyl and a heterocyclic radical;

20 • R<sup>2</sup> and R<sup>3</sup> together also possibly forming a group =CR<sup>16</sup>R<sup>17</sup>, or alternatively forming, together with the carbon atom that bears them, a cycloalkyl radical or a heterocyclic radical;

25 • R<sup>4</sup> is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyoxy, aryloxy, heteroaryloxy, -N(R<sup>12</sup>R<sup>12'</sup>), -N(R<sup>12</sup>)OR<sup>13</sup>, linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl and a heterocyclic radical;

• R<sup>12</sup> and R<sup>12'</sup>, which may be identical or different, are chosen, independently of each other, from hydrogen and an alkyl, alkenyl, alkynyl, alkylcarbonyl, aryl or heteroaryl radical; or alternatively R<sup>12</sup> and R<sup>12'</sup> may form, together with the nitrogen atom to which they are attached, a monocyclic or

bicyclic heterocyclic group containing a total of 5 to 10 atoms, among which 1, 2, 3 or 4 are chosen, independently of each other, from nitrogen, oxygen and sulfur, the said heterocyclic radical also optionally comprising 1, 2, 3 or 4 double bonds and optionally being substituted by one or more chemical groups, which may be 5 identical or different, chosen from hydroxyl, halogen atom, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, heteroaryl, heterocyclic radical and trifluoromethyl;

•  $R^{13}$  is chosen from hydrogen and an alkyl, alkenyl, alkynyl, aryl, heteroaryl,  $-N(R^{12}R^{12'})$  or  $-N(R^{12})OR^{13}$  radical;

•  $R^{14}$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, carboxyl, 10 alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylcarbonyl, alkoxy carbonyl, aryl, aryl-alkyl, heteroaryl, cycloalkyl and a heterocyclic radical;

$R^{14}$  may also form a bond with  $R^2$ , thus forming a double bond between the carbon atoms respectively bearing the substituents  $R^{14}$  and  $R^2$ ; or alternatively  $R^{14}$  forms, with  $R^2$  and with the carbon atoms that bear them, a ring containing a total 15 of 3, 4, 5, 6 or 7 carbon atoms, among which 1, 2 or 3 may be replaced with an atom chosen from nitrogen, oxygen and sulfur, the said ring possibly comprising one or more unsaturations in the form of (a) double bond(s); and being optionally substituted by one or more radicals, which may be identical or different, chosen from oxo, alkoxy, alkoxy carbonyl and alkylcarbonyloxy;

•  $R^{15}$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, carboxyl, alkyl, alkenyl, alkynyl, alkylcarbonyl, alkoxy carbonyl, alkoxy, alkenyloxy, alkynyl-oxy, aryloxy, cycloalkyloxy, heteroaryloxy, heterocyclyloxy, alkylthio, alkenylthio, alkynylthio, arylthio, cycloalkylthio, heteroarylthio, heterocyclthio, aryl, heteroaryl, cycloalkyl and a heterocyclic radical;

•  $R^{14}$  and  $R^{15}$  also possibly forming, together with the carbon atom that bears them, a cycloalkyl radical or a heterocyclic radical;

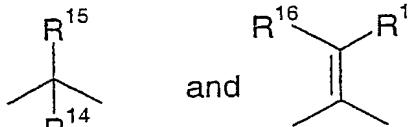
•  $R^{16}$  and  $R^{17}$ , which may be identical or different, are chosen, independently of each other, from hydrogen, a halogen atom, an alkyl, aryl, heteroaryl or cycloalkyl radical and a heterocyclic radical; or alternatively

30  $R^{16}$  and  $R^{17}$  form, together with the carbon atom that bears them, a cycloalkyl radical or a heterocyclic radical; and

- $R^{11}$  is chosen from hydrogen and an alkyl, aryl, arylalkyl; heteroaryl, heteroarylalkyl, cycloalkyl or cycloalkylalkyl radical, and any protecting group for an amine function;
- with the restriction that when  $R^3$ ,  $R^2$  and  $R^{14}$  each represent hydrogen, then  $R^{15}$  is other than an alkyl radical, optionally substituted by aryl, heteroaryl, cycloalkyl and a heterocyclic radical;
- and also the possible geometrical and/or optical isomers thereof, and possible tautomeric forms thereof;
- the solvates and hydrates of these compounds;
- and the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

37. Use according to Claim 36, in which the compound belongs to the family 15 (Ib) of the general formula (I) in which:

- $W$  represents a divalent radical chosen from the radicals:



and

- $R^1$  represents a phenyl radical, optionally substituted by 1, 2 or 3 groups chosen from cyano, nitro, phenyl, benzyl, alkyl, alkenyl containing from 2 to 4 carbon atoms, alkynyl containing from 2 to 4 carbon atoms, alkoxy, thiol  $-SR^{13'}$ ,  $-S(O)R^{13'}$  and  $-S(O_2)R^{13'}$ , and a halogen atom;
- $R^2$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, optionally substituted alkyl, in particular benzyl, alkenyl containing from 2 to 4 carbon atoms, alkoxy, alkylthio and phenyl;
- $R^3$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, optionally substituted alkyl, in particular benzyl, alkenyl containing from 2 to 4 carbon atoms, alkoxy, alkylthio and phenyl;
- $R^2$  and  $R^3$  together also possibly forming a group  $=CR^{16}R^{17}$ ;

•  $R^4$  is chosen from hydroxyl, optionally substituted alkoxy, in particular benzyloxy, alkenyloxy containing from 2 to 4 carbon atoms, alkynyloxy containing from 2 to 4 carbon atoms, phenoxy,  $-N(R^{12}R^{12'})$  and  $-N(R^{12})OR^{13}$ ;

5 •  $R^{12}$  and  $R^{12'}$ , which may be identical or different, are chosen, independently of each other, from hydrogen, an optionally substituted alkyl radical, in particular benzyl, alkenyl containing from 2 to 4 carbon atoms, alkynyl containing from 2 to 4 carbon atoms, and phenyl;

10 •  $R^{13}$  is chosen from hydrogen, an optionally substituted alkyl radical, in particular benzyl, alkenyl containing from 2 to 4 carbon atoms, alkynyl containing from 2 to 4 carbon atoms, and phenyl;

•  $R^{13'}$  is chosen from an optionally substituted alkyl radical, in particular benzyl, alkenyl containing from 2 to 4 carbon atoms, alkynyl containing from 2 to 4 carbon atoms, phenyl and  $-N(R^{12}R^{12'})$ ;

15 •  $R^{14}$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, optionally substituted alkyl, in particular benzyl, alkenyl containing from 2 to 4 carbon atoms, alkoxy, alkylthio and phenyl;

$R^{14}$  may also form a bond with  $R^2$ , thus forming a double bond between the carbon atoms respectively bearing the substituents  $R^{14}$  and  $R^2$ ;

20 •  $R^{15}$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, optionally substituted alkyl, in particular benzyl, alkenyl containing from 2 to 4 carbon atoms, alkoxy, alkylthio and phenyl;

•  $R^{16}$  is chosen from hydrogen, a halogen atom, hydroxyl, thiol, optionally substituted alkyl, in particular benzyl, alkenyl containing from 2 to 4 carbon atoms, alkoxy, alkylthio and phenyl; and

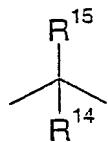
25 •  $R^{17}$  represents a hydrogen atom;  
with the restriction that when  $R^3$ ,  $R^2$  and  $R^{14}$  each represent hydrogen, then  $R^{15}$  is other than an alkyl radical, optionally substituted by aryl, heteroaryl, cycloalkyl and a heterocyclic radical;

30 and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;  
the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

5 38. Use according to either of Claims 33 and 34, in which the compound is chosen from the family (Ic) of the general formula (I), in which:

- W represents the divalent radical:



10 • R<sup>1</sup> represents a radical chosen from linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, a heterocyclic radical, an aryl radical and a heteroaryl radical;

15 • R<sup>2</sup> represents hydrogen;

• R<sup>3</sup> represents hydrogen;

• R<sup>4</sup> is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyoxy, aryloxy, heteroaryloxy, -N(R<sup>12</sup>R<sup>12'>) and -N(R<sup>12</sup>)OR<sup>13</sup>;

20 • R<sup>12</sup> and R<sup>12'>, which may be identical or different, are chosen, independently of each other, from hydrogen and an alkyl, alkenyl, alkynyl, alkylcarbonyl, aryl or heteroaryl radical; or alternatively R<sup>12</sup> and R<sup>12'> may form, together with the nitrogen atom to which they are attached, a monocyclic or bicyclic heterocyclic group containing a total of 5 to 10 atoms, among which 1, 2, 3 or 4 are chosen, independently of each other, from nitrogen, oxygen and sulfur, the said heterocyclic radical also optionally comprising 1, 2, 3 or 4 double bonds and optionally being substituted by one or more chemical groups, which may be identical or different, chosen from hydroxyl, halogen atom, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, heteroaryl, heterocyclic radical and trifluoromethyl;

25 • R<sup>13</sup> is chosen from hydrogen and an alkyl, alkenyl, alkynyl, aryl, heteroaryl, -N(R<sup>12</sup>R<sup>12'>) or -N(R<sup>12</sup>)OR<sup>13</sup> radical;

• R<sup>14</sup> represents hydrogen;

• R<sup>15</sup> represents hydrogen;

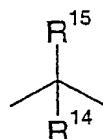
and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

5 and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

39. Use according to either of Claims 33 and 34, in which the compound is chosen from the family (Id) of the general formula (I), in which:

10 • W represents the divalent radical:



• R<sup>1</sup> represents a radical chosen from linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, a heterocyclic radical, an aryl radical and a heteroaryl radical;

15 • R<sup>2</sup> represents hydrogen;

• R<sup>3</sup> represents hydrogen;

• R<sup>4</sup> is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyoxy, aryloxy, heteroaryloxy, -N(R<sup>12</sup>R<sup>12'</sup>) and -N(R<sup>12</sup>)OR<sup>13</sup>;

20 • R<sup>12</sup> and R<sup>12'</sup>, which may be identical or different, are chosen, independently of each other, from hydrogen and an alkyl, alkenyl, alkynyl, alkyl carbonyl, aryl or heteroaryl radical; or alternatively R<sup>12</sup> and R<sup>12'</sup> may form, together with the nitrogen atom to which they are attached, a monocyclic or bicyclic heterocyclic group containing a total of 5 to 10 atoms, among which 1, 2, 3 or 4 are chosen, independently of each other, from nitrogen, oxygen and sulfur, the said heterocyclic radical also optionally comprising 1, 2, 3 or 4 double bonds and optionally being substituted by one or more chemical groups, which may be identical or different, chosen from hydroxyl, halogen atom, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, heteroaryl, heterocyclic radical and trifluoromethyl;

25 • R<sup>13</sup> is chosen from hydrogen and an alkyl, alkenyl, alkynyl, aryl, heteroaryl, -N(R<sup>12</sup>R<sup>12'</sup>) or -N(R<sup>12</sup>)OR<sup>13</sup> radical;

- $R^{14}$  represents hydrogen; and
- $R^{15}$  is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyloxy, aryloxy, cycloalkyloxy, heteroaryloxy and heterocyclyloxy;

5 and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

10 40. Use according to either of Claims 33 and 34, in which the compound is chosen from the family (Ie) of the general formula (I), in which:

- $W$  represents the divalent radical:

$$\begin{array}{c} R^{15} \\ | \\ \diagup \quad \diagdown \\ R^{14} \quad R^{14} \end{array}$$

- $R^1$  represents a radical chosen from linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, a heterocyclic radical, an aryl radical and a heteroaryl radical;
- $R^2$  and  $R^{14}$  together form a bond, thus forming a double bond between the carbon atoms respectively bearing  $R^2$  and  $R^{14}$ ;
- 20 •  $R^3$  represents hydrogen;
- $R^4$  is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyloxy, aryloxy, heteroaryloxy,  $-N(R^{12}R^{12'})$  and  $-N(R^{12})OR^{13}$ ;
- $R^{12}$  and  $R^{12'}$ , which may be identical or different, are chosen, independently of each other, from hydrogen and an alkyl, alkenyl, alkynyl, alkylcarbonyl, aryl or heteroaryl radical; or alternatively  $R^{12}$  and  $R^{12'}$  may form, 25 together with the nitrogen atom to which they are attached, a monocyclic or bicyclic heterocyclic group containing a total of 5 to 10 atoms, among which 1, 2, 3 or 4 are chosen, independently of each other, from nitrogen, oxygen and sulfur, the said heterocyclic radical also optionally comprising 1, 2, 3 or 4 double bonds and optionally being substituted by one or more chemical groups, which may be

identical or different, chosen from hydroxyl, halogen atom, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, heteroaryl, heterocyclic radical and trifluoromethyl;

•  $R^{13}$  is chosen from hydrogen and an alkyl, alkenyl, alkynyl, aryl, heteroaryl,  $-N(R^{12}R^{12'})$  or  $-N(R^{12})OR^{13}$  radical; and

5 •  $R^{15}$  represents hydrogen;

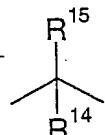
and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid 10 or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

41. Use according to either of Claims 33 and 34, in which the compound is chosen from the family (If) of the general formula (I), in which:

15 •  $W$  represents the divalent radical:



•  $R^1$  represents a radical chosen from linear or branched alkyl containing from 1 to 14 carbon atoms and optionally substituted, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, a heterocyclic radical, an aryl radical and a heteroaryl radical;

20 •  $R^2$  and  $R^{14}$  together form a bond, thus forming a double bond between the carbon atoms respectively bearing  $R^2$  and  $R^{14}$ ;

•  $R^3$  represents hydrogen;

•  $R^4$  is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyoxy, aryloxy, heteroaryloxy,  $-N(R^{12}R^{12'})$  and  $-N(R^{12})OR^{13}$ ;

25 •  $R^{12}$  and  $R^{12'}$ , which may be identical or different, are chosen, independently of each other, from hydrogen and an alkyl, alkenyl, alkynyl, alkylcarbonyl, aryl or heteroaryl radical; or alternatively  $R^{12}$  and  $R^{12'}$  may form, together with the nitrogen atom to which they are attached, a monocyclic or bicyclic heterocyclic group containing a total of 5 to 10 atoms, among which 1, 2,

3 or 4 are chosen, independently of each other, from nitrogen, oxygen and sulfur, the said heterocyclic radical also optionally comprising 1, 2, 3 or 4 double bonds and optionally being substituted by one or more chemical groups, which may be identical or different, chosen from hydroxyl, halogen atom, alkyl, alkenyl, alkynyl, 5 alkoxy, alkylthio, aryl, heteroaryl, heterocyclic radical and trifluoromethyl;

- $R^{13}$  is chosen from hydrogen and an alkyl, alkenyl, alkynyl, aryl, heteroaryl,  $-N(R^{12}R^{12})$  or  $-N(R^{12})OR^{13}$  radical; and
- $R^{15}$  is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyoxy, aryloxy, cycloalkyloxy, heteroaryloxy and heterocyclyloxy;

10 and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

15 the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

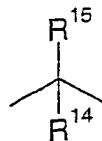
42. Use according to either of Claims 33 and 34, in which the compound is chosen from the family (Ig) of the general formula (I), in which the compound is chosen from:

- 20 4-(4'-methylcyclohexyl)-4-oxobutanoic acid;
- 2-hydroxy-4-(3',4'-difluorophenyl)-4-oxobutanoic acid;
- 2-methoxy-4-(3',4'-difluorophenyl)-4-oxobutanoic acid;
- 2-hydroxy-3-methyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 2-hydroxy-3-phenyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 25 2-hydroxy-3-benzyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 2-methyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 2-methyl-4-(3',4'-difluorophenyl)-4-oxobutanoic acid;
- 2-chloro-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 2-chloro-4-(3',4'-difluorophenyl)-4-oxobutanoic acid;
- 30 2-fluoro-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 2-fluoro-4-(3',4'-difluorophenyl)-4-oxobutanoic acid;
- 2-thiomethyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;

- 2-methylidene-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 2-phenyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 2-benzyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 3-methyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 5 - 3-phenyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 3-benzyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- methyl (R,S)-2-hydroxy-4-(3',4'-dichlorophenyl)-4-oxobutanoate;
- methyl (R,S)-2-benzyl-4-(3',4'-dichlorophenyl)-4-oxobutanoate;
- 4-(3'-fluorophenyl)-4-oxo-2-butenoic acid;
- 10 - 4-(3'-chlorophenyl)-4-oxo-2-butenoic acid;
- 4-(3'-nitrophenyl)-4-oxo-2-butenoic acid;
- 4-(3'-fluoro-4'-methoxyphenyl)-4-oxo-2-butenoic acid;
- 2-methyl-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- 3-methyl-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- 15 - 3-phenyl-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- 3-benzyl-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- 2,3-dimethyl-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- 2-hydroxy-4-(3'-chlorophenyl)-4-oxo-2-butenoic acid;
- 2-hydroxy-4-(3'-fluorophenyl)-4-oxo-2-butenoic acid;
- 20 - 2-hydroxy-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- 2-hydroxy-4-(3',4'-difluorophenyl)-4-oxo-2-butenoic acid; and
- 2-hydroxy-4-(3'-chloro-4'-methoxyphenyl)-4-oxo-2-butenoic acid;
- and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;
- 25 - the solvates and hydrates of these compounds;
- and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

30 43. Use according to either of Claims 33 and 34, in which the compound is chosen from the family (Ih) of the general formula (I), in which:

- W represents the divalent radical:



- $R^1, R^2, R^3, R^4, R^{12}, R^{12'}, R^{13}$  and  $R^{14}$  are as defined above; and
- $R^{15}$  is chosen from a thiol, alkylthio, alkenylthio, alkynylthio, arylthio, cycloalkylthio, heteroarylthio or heterocyclithio radical;

5 with the restriction that when  $R^2, R^3$  and  $R^{14}$  each represent hydrogen, then  $R^{15}$  cannot represent a thiol or alkylthio radical;

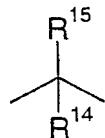
and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

10 and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

44. Use according to Claim 43, in which the compound is chosen from the 15 family (ii) of the general formula (I), in which:

- $W$  represents the divalent radical:



- $R^1$  represents an aryl radical;
- $R^2$  represent hydrogen, or forms a bond with  $R^{14}$ ;
- $R^3$  represents hydrogen;
- $R^4$  is chosen from hydroxyl, alkoxy, alkenyloxy, alkynyoxy, aryloxy, heteroaryloxy,  $-N(R^{12}R^{12'})$  and  $-N(R^{12})OR^{13}$ ;
- $R^{12}$  and  $R^{12'}$ , which may be identical or different, are chosen, independently of each other, from hydrogen and an alkyl, alkenyl, alkynyl, alkylcarbonyl, aryl or heteroaryl radical; or alternatively  $R^{12}$  and  $R^{12'}$  may form, together with the nitrogen atom to which they are attached, a monocyclic or bicyclic heterocyclic group containing a total of 5 to 10 atoms, among which 1, 2, 3 or 4 are chosen, independently of each other, from nitrogen, oxygen and sulfur,

the said heterocyclic radical also optionally comprising 1, 2, 3 or 4 double bonds and optionally being substituted by one or more chemical groups, which may be identical or different, chosen from hydroxyl, halogen atom, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, heteroaryl, heterocyclic radical and trifluoromethyl;

5        •     $R^{13}$  is chosen from hydrogen and an alkyl, alkenyl, alkynyl, aryl, heteroaryl,  $-N(R^{12}R^{12'})$  or  $-N(R^{12})OR^{13}$  radical;

•     $R^{14}$  represents hydrogen, or forms a bond with  $R^2$ ; and

•     $R^{15}$  represents an arylthio radical;

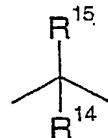
10      and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

15      45. Use according to Claim 44, in which the compound is chosen from the family (ij) of the general formula (I), in which:

•     $W$  represents the divalent radical:



20      •     $R^1$  represents a phenyl radical;

•     $R^2$  represents hydrogen;

•     $R^3$  represents hydrogen;

•     $R^4$  is chosen from hydroxyl and an alkoxy radical;

•     $R^{14}$  represents hydrogen; and

25      •     $R^{15}$  represents a phenylthio radical;

and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

5 46. Use according to Claim 43, in which the compound is chosen from:

- 2-benzylthio-4-phenyl-4-oxobutanoic acid;
- 2-(4'-methylphenylthio)-4-phenyl-4-oxobutanoic acid;
- 2-(4'-chlorophenylthio)-4-phenyl-4-oxobutanoic acid;
- 2-(4'-fluorophenylthio)-4-phenyl-4-oxobutanoic acid;
- 10 2-(4'-methoxyphenylthio)-4-phenyl-4-oxobutanoic acid;
- 2-phenylthio-4-phenyl-4-oxobutanoic acid;
- 2-carboxymethylthio-4-phenyl-4-oxobutanoic acid;
- 2-cyclohexylthio-4-phenyl-4-oxobutanoic acid;
- 2-(2'-naphthylthio)-4-phenyl-4-oxobutanoic acid;
- 15 ethyl 2-phenylthio-4-phenyl-4-oxobutanoate;
- ethyl 2-(4'-fluorophenylthio)-4-phenyl-4-oxobutanoate;
- ethyl 2-(4'-chlorophenylthio)-4-phenyl-4-oxobutanoate;
- ethyl 2-(4'-methylphenylthio)-4-phenyl-4-oxobutanoate;
- ethyl 2-(4'-methoxyphenylthio)-4-phenyl-4-oxobutanoate;
- 20 ethyl 2-(2'-naphthylthio)-4-phenyl-4-oxobutanoate;
- ethyl 2-cyclohexylthio-4-phenyl-4-oxobutanoate;
- ethyl 2-benzylthio-4-phenyl-4-oxobutanoate;
- 2-phenylthio-4-(4'-methoxyphenyl)-4-oxobutanoic acid;
- 2-(4'-fluorophenylthio)-4-(4'-methoxyphenyl)-4-oxobutanoic acid;
- 25 2-(4'-chlorophenylthio)-4-(4'-methoxyphenyl)-4-oxobutanoic acid;
- 2-(4'-methylphenylthio)-4-(4'-methoxyphenyl)-4-oxobutanoic acid;
- 2-(4'-methoxyphenylthio)-4-(4'-methoxyphenyl)-4-oxobutanoic acid;
- 2-(2'-naphthylthio)-4-(4'-methoxyphenyl)-4-oxobutanoic acid;
- 2-cyclohexylthio-4-(4'-methoxyphenyl)-4-oxobutanoic acid;
- 30 2-benzylthio-4-(4'-methoxyphenyl)-4-oxobutanoic acid;
- 2-phenylthio-4-(4'-chlorophenyl)-4-oxobutanoic acid;

- 2-(4'-fluorophenylthio)-4-(4'-chlorophenyl)-4-oxobutanoic acid;
- 2-(4'-chlorophenyl)-4-(4'-chlorophenyl)-4-oxobutanoic acid;
- 2-(4'-methylphenylthio)-4-(4'-chlorophenyl)-4-oxobutanoic acid;
- 2-(4'-methoxyphenylthio)-4-(4'-chlorophenyl)-4-oxobutanoic acid;
- 2-(2'-naphthylthio)-4-(4'-chlorophenyl)-4-oxobutanoic acid;

5 and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

10 and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

47. Use according to either of Claims 33 and 34, in which the compound is chosen from:

- 15 - 4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 4-(3',4'-difluorophenyl)-4-oxobutanoic acid;
- methyl 4-(3',4'-dichlorophenyl)-4-oxobutanoate;
- (R,S)-2-hydroxy-4-(3'-chlorophenyl)-4-oxobutanoic acid;
- (R,S)-2-hydroxy-4-(3'-fluorophenyl)-4-oxobutanoic acid;
- 20 - (R,S)-2-hydroxy-4-(3'-nitrophenyl)-4-oxobutanoic acid;
- (R,S)-2-hydroxy-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- (S)-2-hydroxy-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- (R)-2-hydroxy-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- methyl (R,S)-2-hydroxy-4-(3',4'-dichlorophenyl)-4-oxobutanoate;
- 25 - (R,S)-2-hydroxy-4-(3',4'-difluorophenyl)-4-oxobutanoic acid;
- (R,S)-2-methoxy-4-(3',4'-difluorophenyl)-4-oxobutanoic acid;
- (R,S)-2-methoxy-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- (R,S)-2-methyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- (R,S)-3-methyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- 30 - 2-hydroxy-3-benzyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- (R,S)-2-methyl-4-(3',4'-difluorophenyl)-4-oxobutanoic acid;

- (R,S)-2-chloro-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- (R,S)-2-methylidene-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- (R,S)-3-phenyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- methyl (R,S)-2-benzyl-4-(3',4'-dichlorophenyl)-4-oxobutanoate;
- (R,S)-2-phenyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- (R,S)-2-benzyl-4-(3',4'-dichlorophenyl)-4-oxobutanoic acid;
- (E)-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- (E)-4-(3',4'-difluorophenyl)-4-oxo-2-butenoic acid;
- (E)-4-(3'-fluorophenyl)-4-oxo-2-butenoic acid;
- (E)-4-(3'-chlorophenyl)-4-oxo-2-butenoic acid;
- (E)-4-(3'-nitrophenyl)-4-oxo-2-butenoic acid;
- (E)-2-methyl-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- 3-methyl-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- 3-benzyl-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- (E)-2-hydroxy-4-(3'-chlorophenyl)-4-oxo-2-butenoic acid;
- (E)-2-hydroxy-4-(3'-fluorophenyl)-4-oxo-2-butenoic acid;
- (E)-2-hydroxy-4-(4'-chlorophenyl)-4-oxo-2-butenoic acid;
- (E)-2-hydroxy-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoic acid;
- (E)-2-hydroxy-4-(3',4'-difluorophenyl)-4-oxo-2-butenoic acid;
- methyl (E)-2-hydroxy-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoate; and
- ethyl (E)-2-hydroxy-4-(3',4'-dichlorophenyl)-4-oxo-2-butenoate;

and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

48. Use according to Claim 33, in which the compound belongs to the general formula (II).

49. Use according to Claim 33 or Claim 40, in which the compound belongs to the family (IIa) of the general formula (II) in which:

- $R^5$ ,  $R^6$ ,  $R^7$  and  $R^8$  are as defined above;
- $R^9$  represents hydrogen; and
- $R^{10}$  is chosen from a phenyl radical, optionally substituted in position 3 and/or 4 with an alkyl or alkoxy radical, preferably methyl or methoxy, and a naphthyl radical;

5 and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

10 the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

15 50. Use according to Claim 33 or Claim 48, in which the compound belongs to the family (IIb) of the general formula (II) in which:

•  $R^5$ ,  $R^6$ ,  $R^7$  and  $R^8$ , which may be identical or different, are chosen, independently of each other, from hydrogen, a halogen atom, a nitro radical and a trifluoromethyl radical;

20 the radicals  $R^6$  and  $R^7$  also possibly forming, together with the carbon atoms to which they are attached, a benzene ring, optionally substituted by one or more groups, which may be identical or different, chosen from a halogen atom and a trifluoromethyl, nitro or alkoxy radical; and

25 •  $R^9$  and  $R^{10}$  are as defined above;

and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

51. Use according to one of Claims 33, 48, 49 and 50, in which the compound is chosen from the list consisting of:

- 4-methoxy-N-(4-naphthalen-2-ylthiazol-2-yl)benzenesulfonamide;
- 4-amino-N-[4-(3-nitrophenyl)thiazol-2-yl]benzenesulfonamide;
- 5 - 4-methyl-N-[4-(3-nitrophenyl)thiazol-2-yl]benzenesulfonamide;
- 3,4-dimethoxy-N-[4-(3-nitrophenyl)thiazol-2-yl]benzenesulfonamide;
- 4-methoxy-N-[4-(3-nitrophenyl)thiazol-2-yl]benzenesulfonamide;
- 2-naphthalenesulfonic acid [4-(3-nitrophenyl)thiazol-2-yl]benzenesulfonamide;
- 10 - N-[4-(2-fluoro-5-trifluoromethylphenyl)thiazol-2-yl]-4-methylbenzenesulfonamide;
- N-[4-(3-fluoro-5-trifluoromethylphenyl)thiazol-2-yl]-4-methylbenzenesulfonamide;
- 4-methyl-N-[4-(4-nitrophenyl)thiazol-2-yl]benzenesulfonamide;
- 15 - 4-amino-N-[4-(2-fluoro-5-trifluoromethylphenyl)thiazol-2-yl]benzenesulfonamide; and
- 3,4-dimethoxy-N-[4-(2-fluoro-5-trifluoromethylphenyl)thiazol-2-yl]benzenesulfonamide;

20 and also the possible geometrical and/or optical isomers thereof, and the possible tautomeric forms thereof;

the solvates and hydrates of these compounds;

and also the possible salts thereof with a pharmaceutically acceptable acid or base, or alternatively the pharmaceutically acceptable prodrugs of these compounds.

25 52. Use of a compound as defined in any one of Claims 33 to 51, for the preparation of a medicament for the prevention and/or treatment of diabetes, its complications and/or its related pathologies, by increasing the number of islets of Langerhans cells and reducing the risk of hypoglycaemia.

30 53. Process for manufacturing a medicament for the the treatment and/or prevention of diabetes, its complications and/or its related pathologies, by

increasing the number of islets of Langerhans cells, in which at least one compound of the formula (I) or (II) as defined in one of Claims 1 to 34 is subjected to an *in vitro* test of inhibition of kynurenine 3-hydroxylase, and the molecules responding positively to the said tests are then conditioned in the form of a pharmaceutical composition, optionally with addition of a pharmaceutically acceptable filler or vehicle.

54. Process for screening candidate compounds for activity in the prevention or treatment of diabetes, its complications and/or its related pathologies, by  
10 increasing the number of islets of Langerhans cells by inhibiting kynurenine 3-hydroxylase, the said candidates not corresponding to formula (I) or (II) as defined in one of Claims 33 to 51, in which process the candidate compounds are subjected to an *in vitro* test of inhibition of kynurenine 3-hydroxylase, and the candidate that has responded positively to this test is selected.